

*Occultations of Stars by the Moon observed at the Royal Observatory,
Greenwich, in the year 1916.*

(Communicated by the Astronomer Royal.)

| Date and G.M.T. 1916. | Star and Phase of Occultation. | Magni- tude. | Obser- ver. | Aper- ture. |
|-----------------------------------|-----------------------------------|-----------------|----------------|------------------------|
| Jan. 15 12 5 1'43 | χ Tauri, D | 5.3 | A.C. | $2\frac{3}{4}$ inches. |
| , 1.14 | ,, , | ,, | R.C. | $6\frac{3}{4}$ |
| , 1.13 | ,, , | ,, | F.J. | 10 |
| Feb. 7 9 27 22.57 ^a | W.B. O., 579, D | 6.5 | A.C. | $2\frac{3}{4}$ |
| May 8 11 31 25.58 | d' Cancer, D | 5.9 | A.C. | $2\frac{3}{4}$ |
| , 25.12 | ,, , | ,, | W. | 10 |
| Sept. 15 15 22 18.06 ^b | ϵ Arietis, R | 4.6 | A.C. | $2\frac{3}{4}$ |
| 16 11 41 50.90 | 26 Tauri, D* | 6.6 | H. | 10 |
| 16 12 3 48.30 ^c | 27 Tauri, D* | 3.7 | H. | 10 |
| 16 12 23 35.76 | 28 Tauri, D* | 5.2 | H. | 10 |
| 16 12 55 5.21 | 27 Tauri, R | 3.7 | H. | 10 |
| Nov. 2 8 35 56.85 | 94 B Capricorni, D | 5.7 | A.C. | $2\frac{3}{4}$ |
| 7 6 47 23.74 | 212 B Piscium, D | 7.1 | H. | 10 |

Phenomena marked with an asterisk occurred at the Moon's Bright Limb; all other phenomena at the Dark Limb. The telescopes used are as follows:—

Aperture 10 in., Astrographic Equatorial (Guiding Telescope).

„ $6\frac{3}{4}$ in., Sheepshanks Equatorial.

„ $2\frac{3}{4}$ in., Portable telescope in Altazimuth Dome.

The initials H., A.C., W., R.C., F.J., are those of Mr. Hollis, Mr. Crommelin, Mr. Witchell, Mr. Cullen, and Mr. Jeffreys respectively.

Notes.

- a. The star was too faint to hold steadily.
- b. Clouds passing; the power employed was too low to show the duplicity of the star.
- c. The observer noted that the count of seconds was doubtful.

Royal Observatory, Greenwich:
1917 Jan. 11.

Micrometrical Measures of Double Stars (11th Series) and New Double Stars. By Rev. T. E. Espin, M.A.

The measures in the following list have been made with the 24-in. Calver reflector, with the exception of a few stars measured in the early part of 1914. Of the following stars of h there are, as far as I am aware, no other measures :—

| h 1014 | h 1715 | h 2557 |
|----------|----------|----------|
| 1017 | 1765 | 2559 |
| 1021 | 1831 | 2564 |
| 1031 | 1932 | 2568 |
| 1385 | 1978 | 2803 |
| 1571 | 2516 | 2869 |

Two of h 's stars I have been unable to find :—

(1) h 1679 was searched for on 1916 December 15. It is certainly identical with h 1673, the R.A. being one minute too great, and the position angle being reversed.

(2) h 2593, searched for on 1916 April 22, 28, May 3, and not found.

| Name. | R.A. 1900. | Decl. | P. | D. | Mags. | Nts. | Date. | Year. | |
|-------------|------------|------------|--------------|------------|-------------|------|-------|-------|---------|
| | h o | m o' o" | ° +44 40' | ° 235.1 | " 20°37' | 6.5 | 9.2 | 2 | .991 14 |
| +44°.4550 | 0 | 0'0" | +44 40' | 235.1 | 20°37' | 6.5 | 9.2 | 2 | .991 14 |
| A 110 | 0.6 | 42 6 | 122.1 | 1.77 | 9.2 9.3 | 2 | .902 | 16 | |
| Espin 153 | 11.2 | 40 44 | 242.2 | 2.37 | 9.5 10.6 | 3 | .004 | 17 | |
| h 1014 | 13.4 | 41 56 | 50.5 | 11.51 | 9.4 9.5 | 2 | .939 | 16 | |
| h 1017 | 14.8 | 41 59 | 263.1 | 16.43 | 9.8 11.2 | 2 | .939 | 16 | |
| h 1021 | 16.6 | 41 40 | 246.7 | 6.08 | 9.1 9.5 | 4 | .950 | 16 | |
| h 1978 | 24.9 | 43 36 | 223.2 | 5.61 | 9.5 9.7 | 4 | .925 | 16 | |
| h 1031 | 27.1 | 41 10 | 142.8 | 6.16 | 9.6 11.5 | 3 | .973 | 16 | |
| ρ 62 | 29.7 | 44 17 | 310.5 | 6.79 | 9.1 10.0 | 2 | .961 | 14 | |
| Espin 444 | 31.4 | 44 57 | 193.0 | 2.63 | 9.2 9.5 | 2 | .843 | 14 | |
| Espin 445 | 32.6 | 44 54 | 348.7 | 3.82 | 9.3 10.3 | 1 | .865 | 14 | |
| Σ 44 | 33.0 | 40 26 | 266.8 | 10.30 | 8.6 9.2 | 2 | .961 | 16 | |
| Espin 157' | 1 7.8 | 40 37 | 92.1 | 15.85 | 7.0 12.8 | 3 | .978 | 16 AB | |
| | | | 48.0 | 19.68 | | 13.2 | 2 | .981 | AC |
| Arg. vi. 3 | 8.9 | 42 23 | 288.9 | 11.60 | 8.8 9.0 | 2 | .861 | 16 BC | |
| | | | 101.9 | 34.36 | A = 8.3 | 2 | .861 | 16 AB | |
| Espin 4 | 25.2 | 43 6 | 97.1 | 3.18 | 7.9 8.8 | 2 | .100 | 16 | |
| +43°.322 | 28.8 | 42 45 | 94.8 | 44.38 | 8.6 8.8 | 2 | .018 | 16 | |
| A 1527 | 55.2 | 43 11 | 238.8 | 5.21 | 8.2 10.1 | 3 | .079 | 16 | |
| Espin 48 | 2 3.4 | 42 23 | 200.1 | 9.27 | 7.4 11.0 | 3 | .102 | 16 | |
| ρ 66 | 13.0 | 42 32 | 187.4 | 6.10 | 9.3 10.2 | 2 | .891 | 16 | |